1. A method for identifying a gene associated with a desired phenotype, said method comprising the steps of:

(a) providing a plurality of cell cultures, each comprising plant, animal, or fungal cells capable of exhibiting said desired phenotype;

(b) contacting cells of step (a) with a stimulus that either (i) induces said cells to exhibit said phenotype, or (ii) does not induce said cells to exhibit said phenotype;

(c) determining the presence of the desired phenotype in the cells of step (b); and

(d) identifying a gene in said cells that has increased expression in response to stimuli that induce said phenotype but does not have increased expression in response to stimuli that do not induce said phenotype, wherein said identified gene is associated with said desired phenotype.

2. The method of claim 1, wherein said cells are plant cells.

3. The method of claim 2, wherein said phenotype is the production of terpenes.

4. The method of claim 3, wherein said terpenes comprise monoterpenes, diterpenes, or sesquiterpenes.

5. The method of claim 2, wherein said plant cells comprise *Ajuga reptans* cells.

6. The method of claim 2, wherein said plant cells comprise *Taxus baccata* cells.

7. The method of claim 2, wherein said gene encodes a terpene cyclase.

8. The method of claim 7, wherein said terpene cyclase is a monoterpene cyclase, diterpene cyclase, or sesquiterpene cyclase.

9. The method of claim 7, wherein said terpene cyclase is a taxadiene cyclase

10. The method of claim 2, wherein said stimulus comprises a preparation from *Candida albicans.*

11. The method of claim 2, wherein said stimulus comprises methyl jasmonate.

12. The method of claim 2, wherein said phenotype is the production of a catechin.

13. The method of claim 12, wherein said catechin is epi-gallocatechin gallate or epi-catechin gallate.

14. The method of claim 2, wherein said plant cells comprise cells of a species of the family Crassulaceae.

15. The method of claim 14, wherein said plant cells comprise cells of the genus *Crassula.*

16. The method of claim 15, wherein said plant cells comprise cells of the species *C. fascicularis, C. dejecta, C. barkleyi, or C. acinaciformis.*

17. The method of claim 14, wherein said plant cells comprise cells of the genus *Sempervivum.*

18. The method of claim 17, wherein said plant cells comprise cells of the species *S. tectorum.*

19. The method of claim 2, wherein said plant cells comprise cells of the family Polygonaceae.

20. The method of claim 19, wherein said plant cells comprise cells of the genus *Fallopia.*

21. The method of claim 20, wherein said plant cells comprise cells of the species *F. convolvulus.*

22. The method of claim 19, wherein said plant cells comprise cells of the genus *Rumex.*

23. The method of claim 22, wherein said plant cells comprise cells of the species *R. obtusifolia* or *R. sagittatus.*

24. The method of claim 2, wherein said gene associated with said desired phenotype encodes a protein that affects the accumulation of a catechin.

25. The method of claim 24, wherein said protein is a galloyltransferase, epimerase, or reductase.

26. The method of claim 2, wherein said phenotype is the accumulation of a catechin and said stimulus comprises methyl jasmonate, zeatin, 24-epibrassinolide, or 1-aminocyclopropane-1-carboxylic acid.

27. A method for producing a substantially pure catechin, said method comprising the steps of:

a) providing plant cells of the genus *Crassula*; and

b) purifying a catechin from said plant cells.

28. The method of claim 27, wherein said plant cells are in the form of a plant cell culture.

29. The method of claim 27, wherein said plant cells are in the form of a plant.

30. The method of claim 27, wherein said catechin is epigallocatechin gallate, epicatechin gallate, epigallocatechin, or gallocatechin.

31. The method of claim 27, wherein said plant cells comprise cells of the species *C. fascicularis*, *C. dejecta, C. barkleyi*, or *C. acinaciformis.*

32. A method for producing a substantially pure catechin, said method comprising the steps of:

a) providing a suspension culture of plant cells of the genus *Fallopia*; and

b) purifying a catechin from said plant cells.

33. The method of claim 32, wherein said catechin is epigallocatechin gallate, epicatechin gallate, epigallocatechin, or gallocatechin.

34. The method of claim 32, wherein said plant cells comprise cells of the species *F. convolvulus.*

35. A method for producing a substantially pure catechin, said method comprising the steps of:

a) providing a suspension culture of plant cells of the genus *Rumex*; and

b) purifying a catechin from said plant cells.

36. The method of claim 35, wherein said plant cells comprise cells of the species *R. obtusifolia* or *R. sagittatus.*

37. A method for identifying a compound or preparation that increases production of a catechin in a plant cell, said method comprising the steps of:

a) providing plant cells capable of producing a catechin;

b) contacting said plant cells with a candidate compound or preparation; and

c) determining the levels of said catechin in said plant cells, wherein an increase in the levels of said catechin identifies said candidate compound or preparation as a compound that increases production of said catechin or preparation.

38. The method of claim 37, wherein said plant cells are in the form of a plant cell culture.

39. The method of claim 37, wherein said plant cells are in the form of a plant.

40. The method of claim 37, wherein said catechin is epigallocatechin gallate, epicatechin gallate, epigallocatechin, or gallocatechin.

41. The method of claim 37, wherein said plant cells comprise cells from a species selected from the group consisting of *C. fascicularis*, *C. dejecta, C. barkleyi*, *C. acinaciformis*, *F. convolvulus*, *R. obtusifolia*, and *R. sagittatus.*

42. A method for identifying a protein that increases production of a catechin in a plant cell, said method comprising the steps of:

a) providing plant cells capable of producing a catechin;

b) expressing in said plant cells a nucleic acid encoding a candidate protein; and

c) determining the levels of said catechin in said plant cells, wherein an increase in the levels of said catechin identifies said candidate protein as a protein that increases production of said catechin.

43. The method of claim 42, wherein said plant cells are in the form of a plant cell culture.

44. The method of claim 42, wherein said plant cells are in the form of a plant.

45. The method of claim 42, wherein said catechin is epigallocatechin gallate, epicatechin gallate, epigallocatechin, or gallocatechin gallate.

46. The method of claim 42, wherein said plant cells comprise cells from a species selected from the group consisting of *C. fascicularis*, *C. dejecta, C. barkleyi*, *C. acinaciformis*, *F. convolvulus*, *R. obtusifolia*, and *R. sagittatus.*

47. The method of claim 42, wherein said candidate protein is a galloyltransferase, epimerase, or reductase involved in the synthesis of epigallocatechin gallate, epicatechin gallate, epigallocatechin, or gallocatechin gallate.

48. A method for functionally characterizing a protein that catalyzes the production of a catechin in a plant cell, said method comprising the steps of:

a) providing a plant cell capable of producing a precursor of said catechin but not said catechin derivative;

b) transgenically expressing in said plant cell a nucleic acid encoding a candidate protein; and

c) determining the levels of said catechin in said plant cell, wherein the production of said catechin identifies said candidate protein as a protein that catalyzes the production of said catechin.

49. The method of claim 48, wherein said plant cell is of the species *C. acinaformis.*

50. A method for identifying a protein that catalyzes the production of a catechin in a plant cell, said method comprising the steps of:

a) providing a first plant cell producing a precursor of said catechin but not said catechin;

b) providing a second plant cell producing said catechin;

c) identifying a transcript present in said second cell but not said first cell, wherein said transcript encodes a protein identified as one that that catalyzes the production of said catechin.

51. The method of claim 50, wherein said first plant cell is of the species *C. acinaformis,* and said second plant cell is of the species *C. barkleyi.*